WSDOT Construction Courses
The courses listed below are available for local agency attendance. This includes cities, counties, ports, tribes, transit agencies, and consultants acting as official city engineer. **Classes are not open to other state agencies, out-of-state, contractors, or consultants who are not acting as an official city engineer.**

*The Standard Specifications is available on-line, on CD, or purchased from WSDOT Engineering Publications ($25 for the 2006 version). Order online, or view, at the following web address
http://www.wsdot.wa.gov/fasc/EngineeringPublications/default.htm
or by calling (360) 705-7484. A yearly Engineering Publications CD Library subscription ($10) is available at this web site.

AGGREGATE PRODUCTION & TESTING INSPECTION

Code: ACA
Hours: 7

Description: This course * Provides an overview of equipment used in aggregate production * Identifies the duties of an inspector prior to start of production * Covers the key areas of inspection during production * Includes practice in testing aggregates for acceptance * Covers safety procedures for working around an aggregate production operation * Identifies post production duties * Gives you a comprehensive course manual containing outlines of the duties of an inspector to critical specifications and testing procedures.

Learning Objectives: Upon completion of the course you will be able to:
1. Identify the proper placement of equipment at a crushing site
2. Determine if aggregates are being properly placed and handled in storage sites
3. Perform standard testing procedures for determining the gradation, sand equivalent, fracture and moisture content of aggregates
4. Complete all necessary documentation
5. Read and interpret boring logs
6. Determine if proper methods of crushing and screening aggregates are being used during production.

Attendees: This course is for aggregate testers, project inspectors and field engineers who are or will be engaged in the inspection, acceptance and documentation of aggregate production.

Comments: A test will be given. Dress for field work to test aggregates

Bring the following:
A current copy of the Standard Specifications
Construction Manual
Calculator

BITUMINOUS SURFACE TREATMENT INSPECTION

Code: ACC
Hours: 4 (may extend to 6 hours)

Description:
1. Provides an overview of equipment used on a Bituminous Surface Treatment (BST) project
2. Covers the preparation of the roadway before placement of BST
3. Identifies key areas of inspection during placement of BST
4. Includes information on collecting material samples
5. Covers safety procedures and proper traffic control during the project
6. Identifies required documentation
7. Gives you a comprehensive course manual containing outlines of the duties of an inspector and references to critical specifications.

Learning Objectives: Upon completion of the course you will be able to:
1. Identify the proper use of equipment in placing BST
2. Implement proper traffic control
3. Perform all necessary documentation
4. Identify lines of communication
5. Obtain the necessary material samples
6. Identify situations which might cause failure in the BST placement

Attendees: For project inspectors and field engineers who are or will be engaged in the inspection, acceptance and documentation of Bituminous Surface Treatment projects.

Comments: A test will be given

Bring the following:
A current copy of the Standard Specifications
Calculator

BRIDGE AND STRUCTURES INSPECTION 201

Code: CQ9
Hours: 16

Description: This course covers construction inspection of bridge and structures. The course will cover many examples of things to watch for and some of the pitfalls faced by our project inspectors and supervisors. Topics will include phases of bridge and structure construction, various walls used on WSDOT projects, structural components, environmental concerns, and safety issues associated with bridge and structure construction.

Learning Objectives: Upon completion of this course, participants will be able to:
1. Be better prepared and familiar with potential construction problems before they occur
2. Understand the critical nature of sequencing during construction
3. Implement appropriate safety concerns and requirements associated with bridge and structure construction
4. Understand and monitor the effectiveness of required BMP's for erosion control measures in construction
5. Understand the importance of following plans and working drawings
6. Have a better understanding of the many types and purposes of bridge construction

Attendees: Project inspectors, supervisors and managers who will be responsible for bridge and structure construction contract administration

Comments: A test will be given

Bring the following:
A current copy of the Standard Specifications
Calculator

BRIDGE STRUCTURES INSPECTION

Code: ACM
Hours: 24

Description:
1. Provides an overview of structural elements of bridges

2. Covers critical phases of bridge construction
3. Identifies key areas of inspection
4. Includes information on collecting required material samples
5. Covers safety procedures on a job site
6. Identifies required documentation
7. Gives you a comprehensive course manual containing outlines of the duties of an inspector and references to critical specifications.

Learning Objectives: Upon completion of the course you will be able to:
1. Identify the key structural elements of bridges
2. Recognize and monitor critical phases of bridge construction
3. Interpret bridge construction plans
4. Identify solutions to field problems during construction
5. Check field dimensions
6. Identify critical lines of communication
7. Evaluate sequencing events for different types of structures.

Attendees: For project inspectors and field engineers who are or will be engaged in the inspection, acceptance and documentation of work on bridge structures. This course covers construction of new bridges and retrofit of existing bridges.

Comments: A test will be given

Bring the following:
A current copy of the Standard Specifications
Calculator

DRAINAGE INSPECTION

Code: ACF
Hours: 8

Description:
1. Provides an overview of the proper drainage installation
2. Covers surveying of drainage structures
3. Identifies key areas of inspection
4. Includes information on collecting required material samples
5. Covers safety procedures during the installation, inspection and testing of a drainage structure
6. Identifies required documentation
7. Gives you a comprehensive course manual containing outlines of the duties of an inspector and references to critical specifications.

Learning Objectives: Upon completion of the course you will be able to:
1. Identify the different types of drainage structures
2. Recognize and use drainage staking information in the field
3. Interpret drainage plans
4. Calculate Structure Excavation Class B
5. Check flow lines and locations of pipes
6. Identify critical lines of communication
7. Complete required documentation.

Attendees: For project inspectors and field engineers who are or will be engaged in the inspection, acceptance and documentation of drainage structures.

Comments: A test will be given

Bring the following:

A current copy of the Standard Specifications
Calculator

ELECTRICAL-ILLUMINATION & SIGNALS

Code: API
Hours: 12

Description:
1. Provides an overview of the construction elements of the installation of signals and illuminations systems
2. Discusses review and approval of shop drawings
3. Identifies key components of illumination and signal systems
4. Covers staking locations of luminaries and signals
5. Includes information on collecting required material samples
6. Identifies required documentation
7. Gives you a comprehensive course manual containing outlines of the duties of an inspector and references to critical specifications.

Objectives: Upon completion of the course you will be able to:
1. Identify illumination and signal system functions
2. Read and interpret illumination and Signal Plans
3. Check lighting and signal locations for possible interference
4. Identify critical lines of communication
5. Complete required documentation

Attendees: For project inspectors and field engineers who are or will be engaged in a project requiring the installation of signals and illumination.

Comments: A test will be given

Bring the following:
A current copy of the Standard Specifications
Calculator

EXCAVATION & EMBANKMENTS INSPECTION

Code: AC3
Hours: 8

Description:
1. Provides an overview of the duties of a grade inspector
2. Defines clearing and grubbing limits
3. Covers environmental issues
4. Demonstrates proper staking procedures
5. Identifies proper methods of compaction
6. Gives an overview of the moisture-density gauge used in determining compaction
7. Includes information on collecting required material samples
8. Covers safety procedures during the installation and inspection of earthwork
9. Identifies required documentation
10. Gives you a comprehensive course manual containing outlines of the duties of an inspector and references to critical specifications.

Learning Objectives: Upon completion of the course you will be able to:
1. Interpret grading plans
2. Recognize and use staking information in the field

3. Evaluate information documented in density reports
4. Identify proper compaction methods
5. Recognize BMP's and evaluate erosion control measures
6. Calculate payment for clearing and grubbing and earthwork
7. Interpret grading stakes for cuts, fills and line
8. Identify critical lines of communication
9. Complete required documentation.

Attendees: For project inspectors and field engineers who are or will be engaged in the inspection, acceptance and documentation of grading on a project.

Comments: A test will be given

Bring the following:
A current copy of the Standard Specifications
Calculator

HOT MIX ASPHALT PLACEMENT

Code: ACB
Hours: 8

Description:
1. Provides an overview of equipment used in placing HMA and Superpave
2. Identifies the duties of an inspector prior to paving
3. Covers the key areas of inspection during placement
4. Covers safety procedures for working around a paving operation
5. Identifies post production duties
6. Gives you a comprehensive course manual containing outlines of the duties of an inspector and references to critical specifications and testing procedures.

Learning Objectives: Upon completion of the course you will be able to:
1. Implement proper asphalt paving inspection techniques
2. Complete required documentation
3. Identify lines of communication
4. Demonstrate an understanding of safety requirements
5. Read paving plans.

Attendees: For project inspectors and field engineers who are or will be engaged in the inspection, acceptance and documentation of Hot Mix Asphalt and Superpave placement.

Comments: A test will be given

Bring the following:
A current copy of the Standard Specifications
Calculator

HOT MIX ASPHALT PRODUCTION & TESTING

Code: BG9
Hours: 14

Description:
1. Provides an overview of equipment used in the production of HMA or Superpave
2. Identifies some of the causes of pavement failures as they relate to the production of HMA 3. Covers the key elements of mix design 4. Includes practice in testing HMA or Superpave mixes for acceptance

5. Covers safety procedures for working around an asphalt plant 6. Identifies documentation requirements 7. Covers Quality Assurance/Quality Control requirements 8. Identifies critical testing information in the acceptance of HMA or Superpave mixes 9. Gives you a comprehensive course manual containing information on the properties of asphalt, causes of pavement failure, descriptions of asphalt plant equipment, samples of documentation, outline of the test procedures required to test for acceptance of HMA or Superpave.

Learning Objectives: Upon completion of the course you will be able to:
1. Identify the function of the equipment at an asphalt plant 2. Check a Job Mix Design Submittal 3. Read and identify critical items on a Mix Design 4. Perform standard testing procedures for acceptance of HMA or Superpave 5. Perform all necessary documentation 6. Use a 45 power curve 7. Use information from HMA and Superpave testing for determining acceptance of mixes 8. Communicate vital information to the paving inspector 9. Identify testing frequency required for Quality Assurance and Quality Control

Attendees: For asphalt concrete testers, project inspectors and field engineers who are or will be engaged in the testing, inspection, acceptance and documentation of Hot Mix Asphalt (HMA) production.

Comments: A test will be given. Dress for field work

Bring the following:
A current copy of the Standard Specifications
Calculator

NUCLEAR GAUGE EMBANKMENT/SURFACING/PAVEMENT APPLICATIONS

Code: ANQ
Hours: 8

Description: Demonstrates the proper use of the nuclear gauge; includes information on collecting samples; discusses the selection of the proper density standard; demonstrates test methods used in determining compaction of various materials; identifies safety procedures to use during the inspection and testing of embankment, surfacing and paving operations; covers required documentation; gives you a comprehensive course manual containing information on the operation of the nuclear gauge and references to critical specifications.

Learning Objectives: Upon completion of the course you will be able to:
Select and use the proper density standard; correct results for oversize and moisture; conduct proper drying procedures; perform density tests with acceptable accuracy; complete required documentation.

Attendees: For entry level to project inspectors.

Comments: A test will be given

Bring the following:
A current copy of the Standard Specifications
Construction Manual
Calculator

NUCLEAR GAUGE AND SAFETY

Code: ALG
Hours: 8

Description: Purpose of course: Discusses the fundamentals of Radiation Theory ; Prepares you for the written and hands-on proficiency exams required for licensing ; Discusses health and safety issues associated with operating the Nuclear Moisture Density gauge ; Provides a working knowledge of the Troxler gauge; Demonstrates

the operation of the gauge . Gives you a comprehensive course manual containing outlines of the duties of an inspector and references to critical specifications.

Learning Objectives: Upon completion of the course you will be able to: Take the proficiency exam; Transport the gauge safely from the office to job site ; Handle emergency situations involving damage to the nuclear gauge.

Attendees: This course is for personnel (WSDOT employees and Local Agency employees only) who will be operating or transporting nuclear gauges. To become a licensed operator you will be required to take both a written and a hands-on proficiency test. At the end of this class you will be given the written exam. A passing score for this exam is 70% or above. Once you have passed this test you will be eligible for your nuclear badge.

Comments: A test will be given

Bring the following:
A current copy of the Standard Specifications
Calculator

PCC FIELD TESTING PROCEDURES

Code: ABT
Hours: 7

Description:
1. Demonstrates slump, air content, and temperature tests
2. Demonstrates fabrication, curing and transportation of cylinders
3. Identifies key aspects of equipment found in concrete plants
4. Discusses the process for random selection of a test sample
5. Covers comparing mix designs vs. batch weights
6. Identifies safety procedures to use during the testing and placement of concrete
7. Covers required documentation
8. Gives you a comprehensive course manual containing information on testing, checking the production of PCC and references to critical specifications.

Learning Objectives: Upon completion of the course you will be able to:
1. Perform slump, air content, and temperature tests
2. Fabricate, cure, and transport cylinders
3. Complete required documentation
4. Compare batch weights vs. mix design

Attendees: For PCC testers, project inspectors and field engineers who are or will be engaged in the testing, acceptance and documentation of Portland Cement Concrete for placement on the jobsite.

Comments: A test will be given. Dress for field work to test aggregates

Bring the following:
A current copy of the Standard Specifications
Construction Manual
Calculator